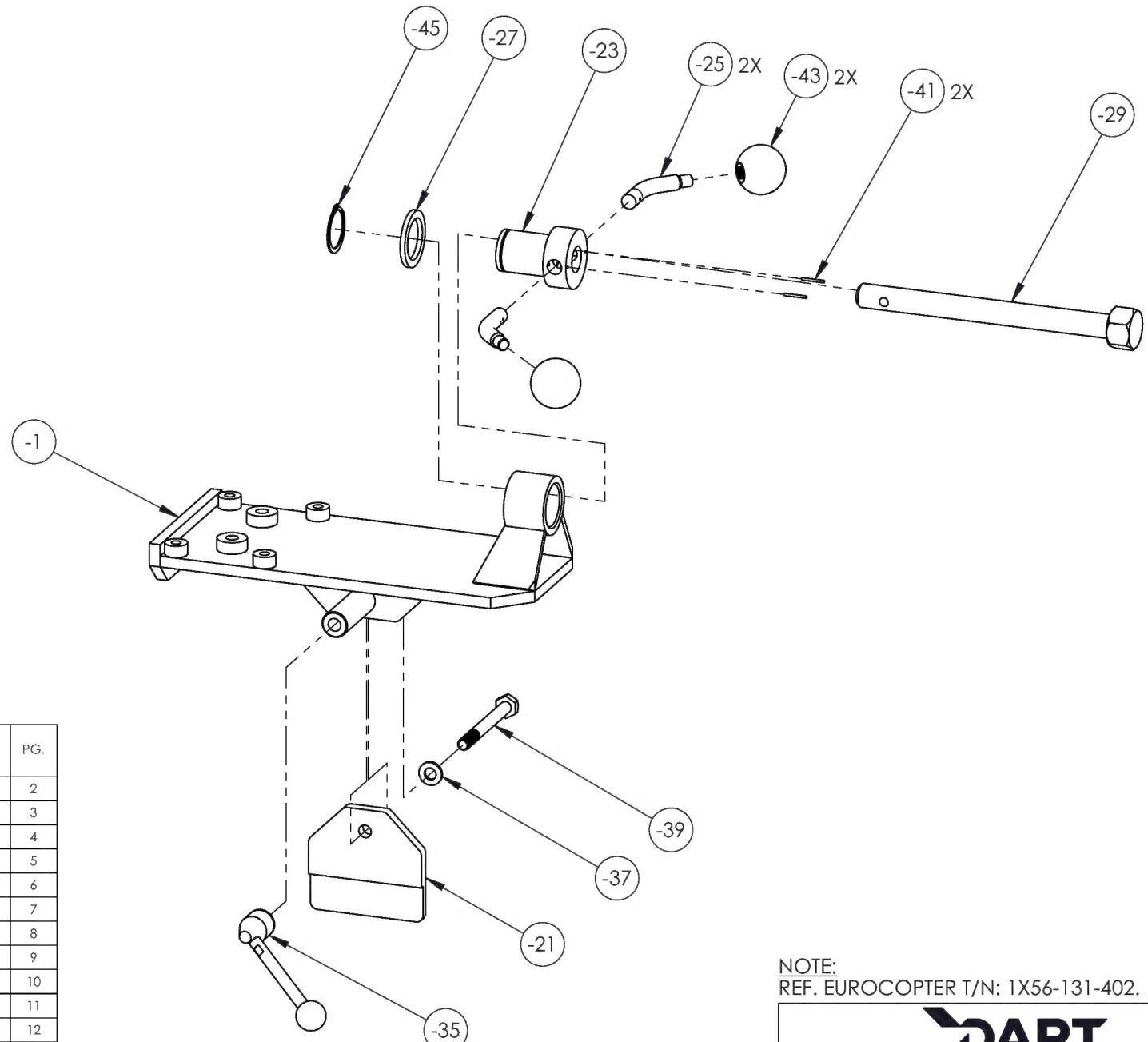
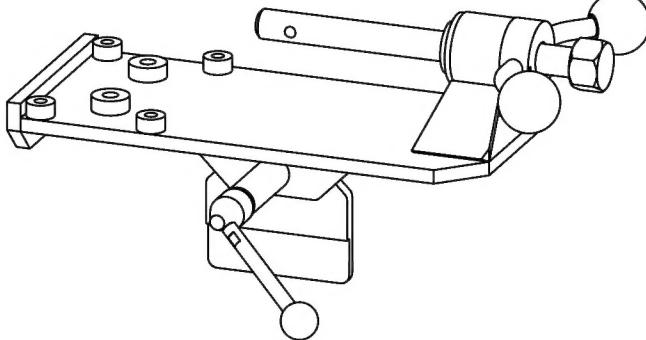


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REV		ECR	DESCRIPTION		DATE	INITIAL	APPROVED
1			RELEASED FOR PRODUCTION.		12/12/2016	DPD	JAG



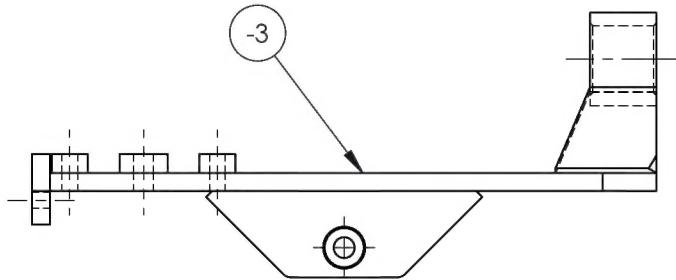
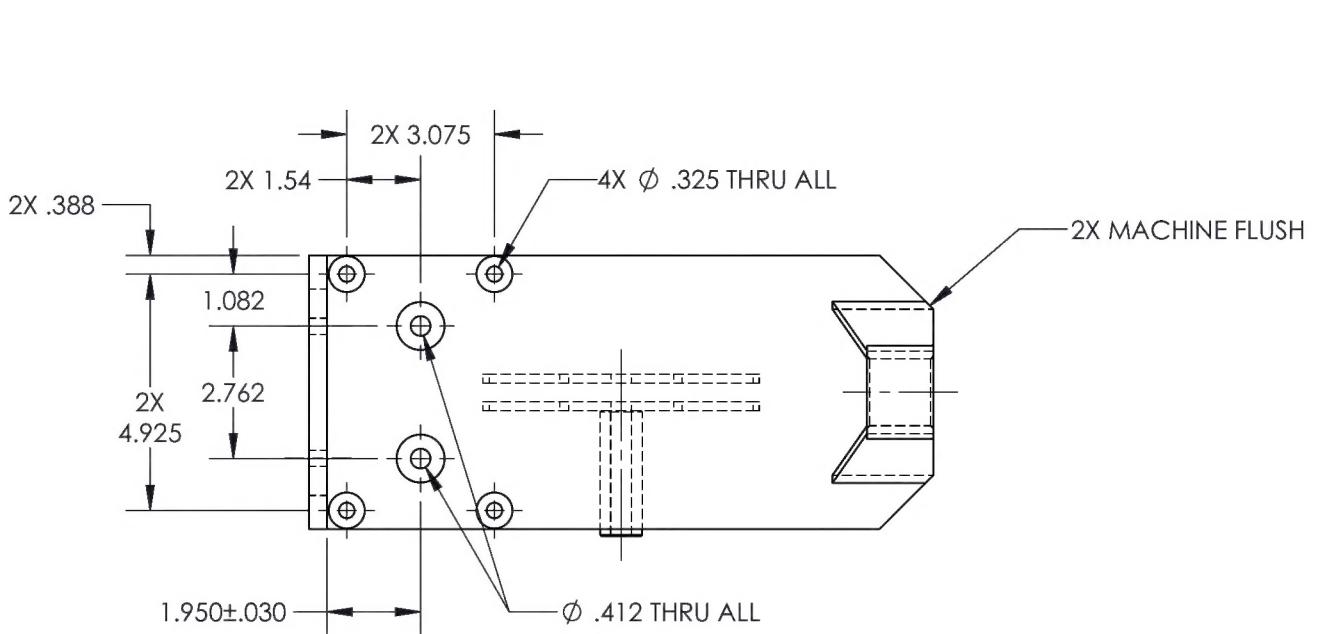
ASSY QTY	ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
	X		-1	1		MACHINED WELDMENT			2
X	1		-3			WELDMENT			3
1			-5			BASE PLATE	A36/1018/1020 HR		4
1			-7			BACK PLATE	A36/1018/1020 HR		5
2			-9			LARGE BOSS	A36/1018/1020 HR		6
4			-11			SMALL BOSS	A36/1018/1020 HR		7
1			-13			TUBE	1018/1020 CR		8
2			-15			TUBE BRACE	A36/1018/1020 HR		9
2			-17			MOUNT PLATE	A36/1018/1020 HR		10
1			-19			CLAMP TUBE	STEEL TUBE		11
			-21	1		VISE PLATE	A36/1018/1020 HR		12
			-23	1		HUB	4140/4142 Q & T		13
			-25	2		CRANK HANDLE	1018/1020 CR		14
			-27	1		SPECIAL WASHER	1018/1020 CR		15
X			-29	1		ACME SCREW WELDMENT			16
1			-31			ACME ROD	STEEL	M20 X 4mm ACME (MCMASTER-CARR #97048A719) MODIFIED	17
1			B/O	-33		ACME NUT	STEEL	M20 X 4mm ACME (MCMASTER-CARR #94353A200)	16
			B/O	-35	1	CLAMP HANDLE	STEEL	M10 (CARR-LANE #CLM-10-AHL-3)	1
			B/O	-37	1	WASHER	STEEL	M10 (MCMASTER-CARR #91166A280)	1
			B/O	-39	1	HEX HEAD CAP SCREW	STEEL	M10 X 1.5mm X 100mm, CLASS 8.8 (MCMASTER-CARR #91280A658)	1
			B/O	-41	2	DOWEL PIN	STEEL	M2 X 20mm (MCMASTER-CARR #91595A034)	1
			B/O	-43	2	KNOB HANDLE	PHENOLIC	M10 X 1.5mm, Ø1-5/8 (CARR-LANE #CLM752-PB)	1
			B/O	-45	1	EXTERNAL RETAINING RING	STEEL	Ø1-3/8 SHAFT (MCMASTER-CARR #97633A360)	1
ASSY -29	ASSY -3	ASSY -1							

NOTE:
REF. EUROCOPTER T/N: 1X56-131-402.

TITLE		ASSEMBLY DEVICE
DWG NO.		RBE1X56-131-402
REV		1
MAT'L		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT FINISH		.XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° X ± .1 SURFACES = 125
SPEC		✓
DRAWN BY:	DUERFELDT .015 x 45° OR .015R	
CHECKED:	MACKOVJAK AFTER PLATING	
OPPS APPR:	ANDERSON INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
QA APPR:	LINDSAY USED ON MODEL	
APPROVED:	GILBERT EC145	
SCALE	1:5	DATE 7/13/2016
SHEET 1 OF 17		

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MACHINED WELDMENT

TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-1
REV	1
MATERIAL	
HEAT TREAT	
FINISH ZINC PLATE	
SPEC ASTM B633 TYPE I SC 2	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
SCALE	1:4
DATE	12/7/2015
SHEET 2 OF 17	

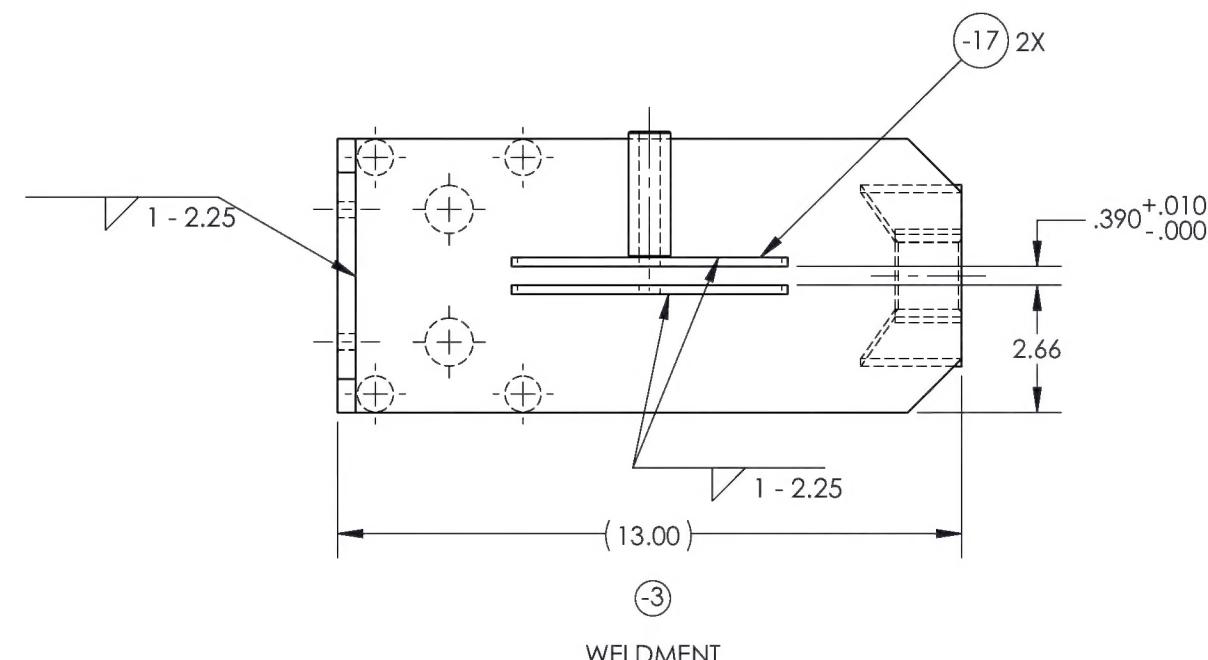
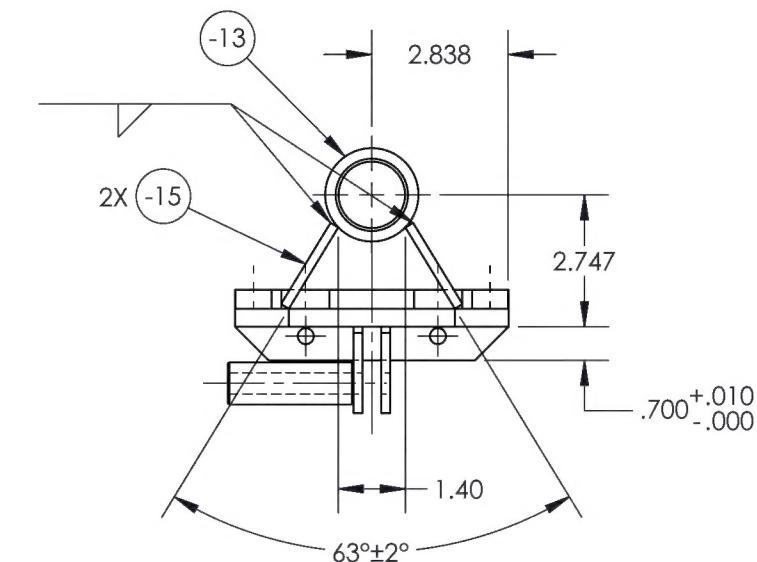
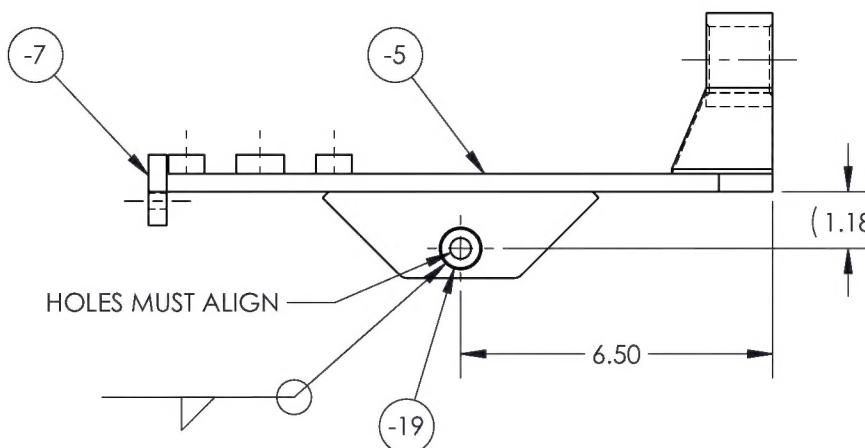
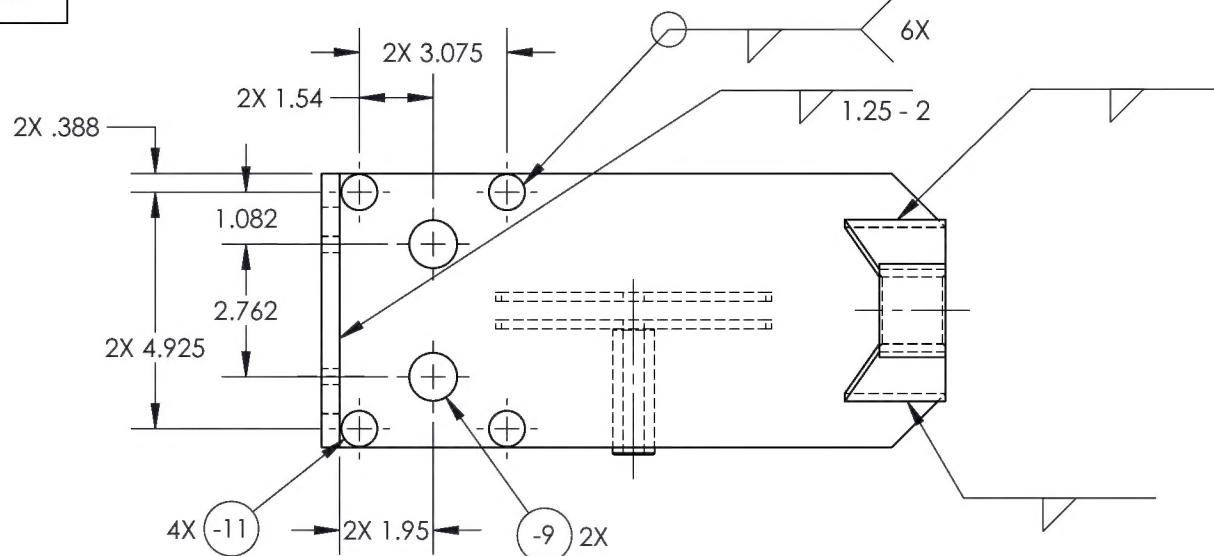
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
.XXX ± .005 FRACTIONS ± 1/8
.XX ± .01 ANGLES ± 5°
X ± .1 SURFACES = 125 ✓

1. BREAK ALL SHARP EDGES
.015 x 45° OR .015R
2. DIMENSIONAL LIMITS APPLY AFTER PLATING
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009

USED ON MODEL
EC145

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DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO. RBE1X56-131-402-3 REV 1	
MATERIAL	
HEAT TREAT	
FINISH SEE -1	
SPEC	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
SCALE	1:4
DATE	7/13/2016
SHEET 3 OF 17	

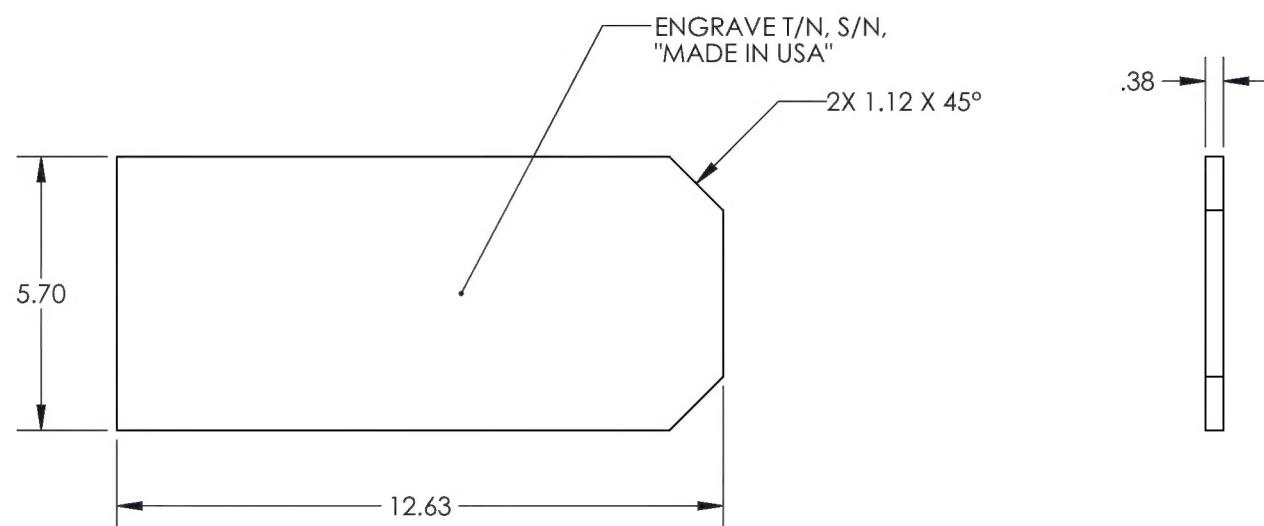
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
.XXX ± .010 FRACTIONS ± 1/8
.XX ± .03 ANGLES ± 1°
.X ± .1 SURFACES = 125

1. BREAK ALL SHARP EDGES
.015 x 45° OR. 015R
2. DIMENSIONAL LIMITS APPLY
AFTER PLATING
3. INTERPRET DIM AND TOL PER
ASME Y14.5M-2009

USED ON MODEL
EC145

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				DESCRIPTION		DATE
				INITIAL	APPROVED	

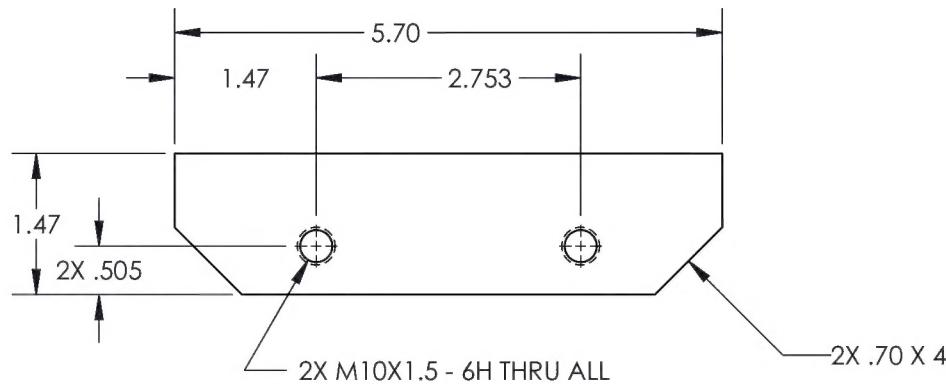


(-5)
BASE PLATE

DART AEROSPACE		
TITLE		
ASSEMBLY DEVICE		
DWG NO.	RBE1X56-131-402-5	
REV	1	
MAT'L A36/1018/1020 HR		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT		.XXX ± .005 FRACTIONS ± 1/8
TREAT		.XX ± .01 ANGLES ± 5°
FINISH SEE -3		X ± .1 SURFACES = 125 ✓
SPEC		
DRAWN BY: DUERFELDT		1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: MACKOVJAK		2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY		USED ON MODEL
APPROVED: GILBERT		EC145
SCALE	1:4	DATE 7/13/2016
		SHEET 4 OF 17

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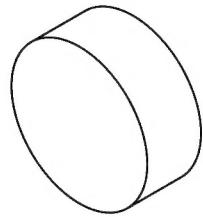
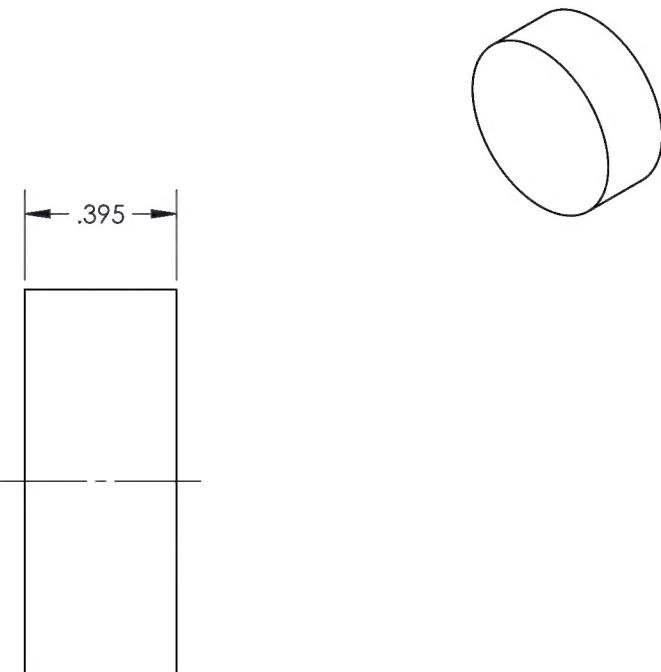
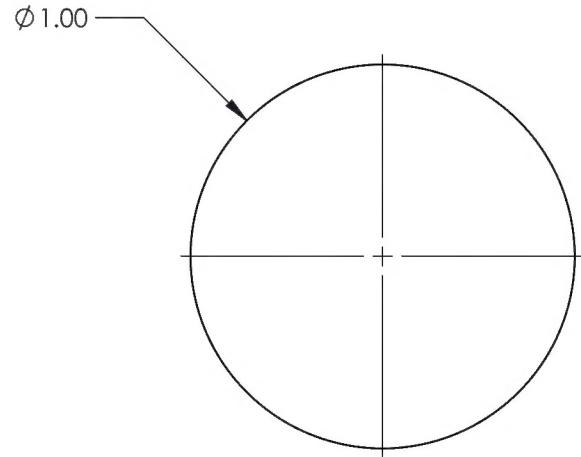
BACK PLATE

(-7)

TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-7
REV	1
MATERIAL A36/1018/1020 HR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT .XXX ± .005 FRACTIONS ± 1/8	
TREAT .XX ± .01 ANGLES ± 5°	
FINISH SEE -3 .X ± .1 SURFACES = 125 ✓	
SPEC	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE 1:2	DATE 7/13/2016
SHEET 5 OF 17	

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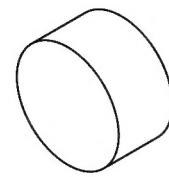
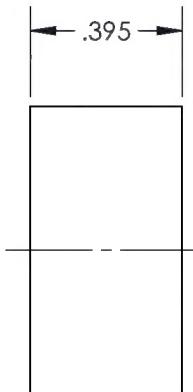
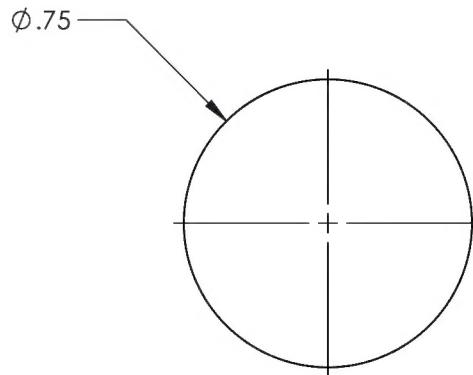
LARGE BOSS

(-9)

DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-9
REV	1
MAT'L A36/1018/1020 HR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	$XXX \pm .005$ FRACTIONS $\pm 1/8$
TREAT	$XX \pm .01$ ANGLES $\pm 5^\circ$
FINISH SEE -3	$X \pm .1$ SURFACES = 125
SPEC	\checkmark
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE	2:1
DATE	7/13/2016
SHEET 6 OF 17	

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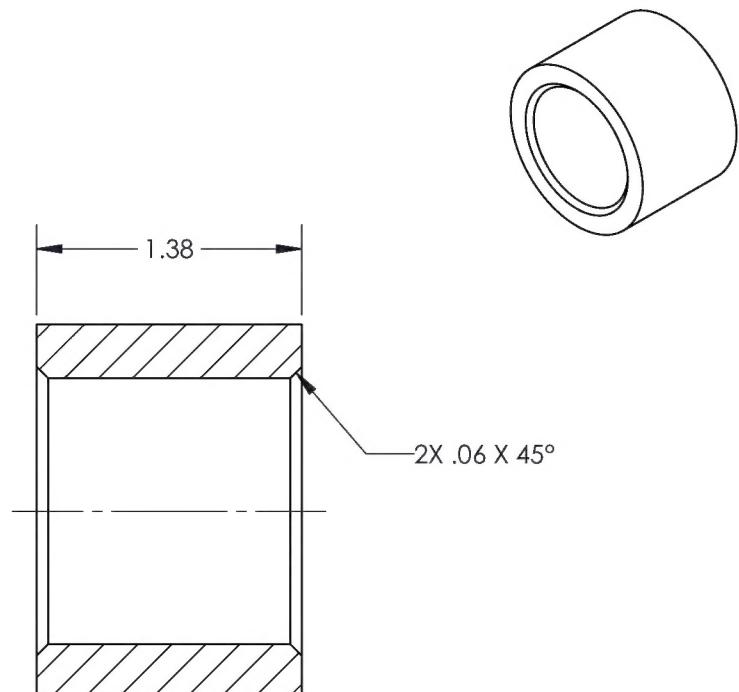
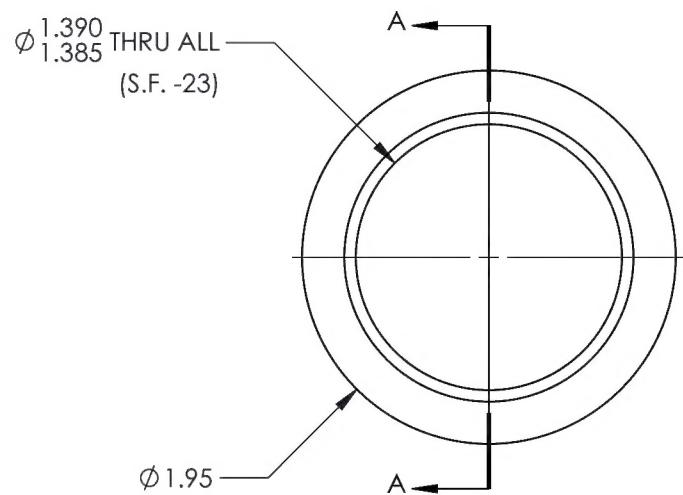
SMALL BOSS

-11

DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-11
REV	1
MAT'L A36/1018/1020 HR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX \pm .005 FRACTIONS \pm 1/8
TREAT	.XX \pm .01 ANGLES \pm 5°
FINISH SEE -3	X \pm .1 SURFACES = 125 ✓
SPEC	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE	2:1
DATE	7/13/2016
SHEET 7 OF 17	

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SECTION A-A

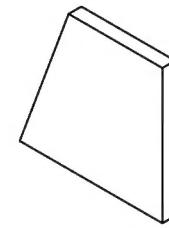
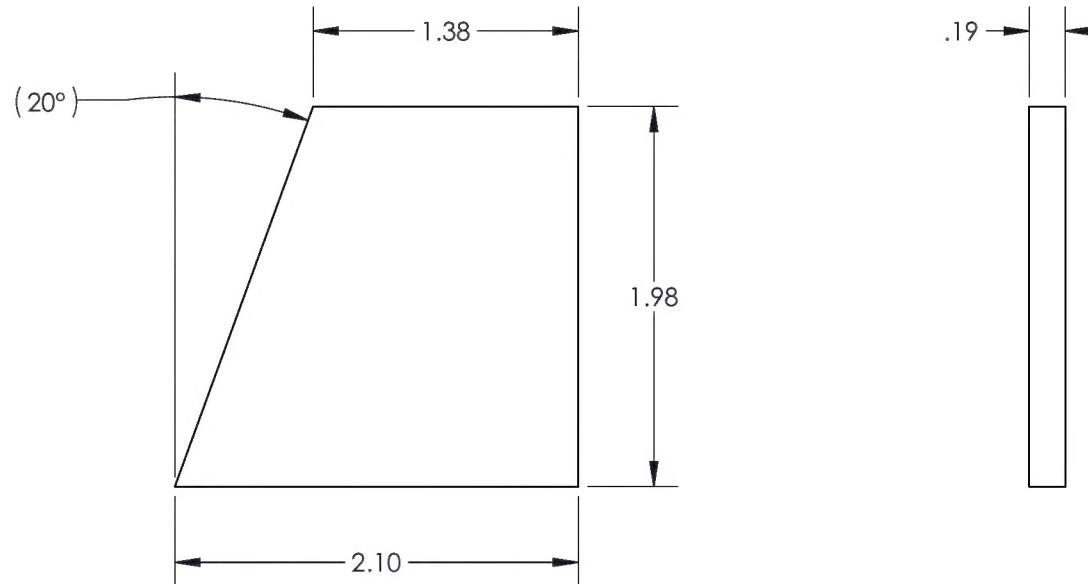
-13

TUBE

DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-13
REV	1
MAT'L 1018/1020 CR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX ± .005 FRACTIONS ± 1/8
TREAT	.XX ± .01 ANGLES ± 5°
FINISH SEE -3	X ± .1 SURFACES = 125 ✓
SPEC	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE	1:1
DATE	7/13/2016
SHEET 8 OF 17	

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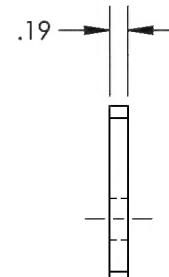
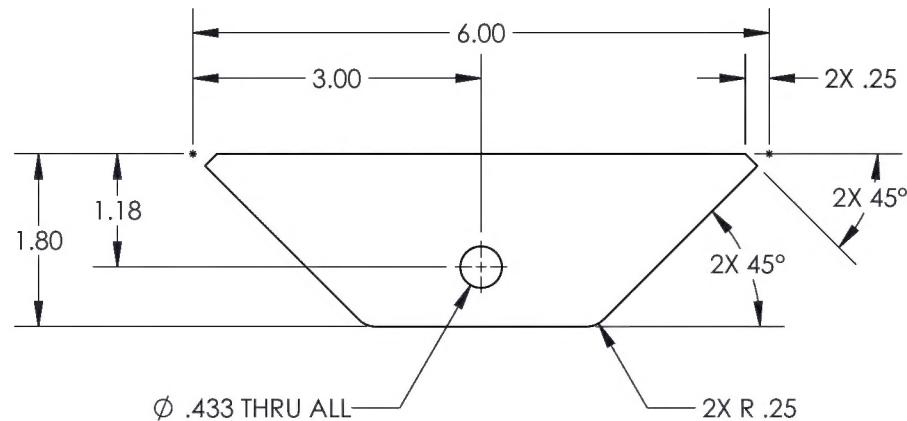
TUBE BRACE

-15

TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-15
REV	1
MATERIAL A36/1018/1020 HR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX ± .005 FRACTIONS ± 1/8
TREAT	.XX ± .01 ANGLES ± 5°
FINISH SEE -3	X ± .1 SURFACES = 125 ✓
SPEC	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE	1:1
DATE	7/13/2016
SHEET 9 OF 17	

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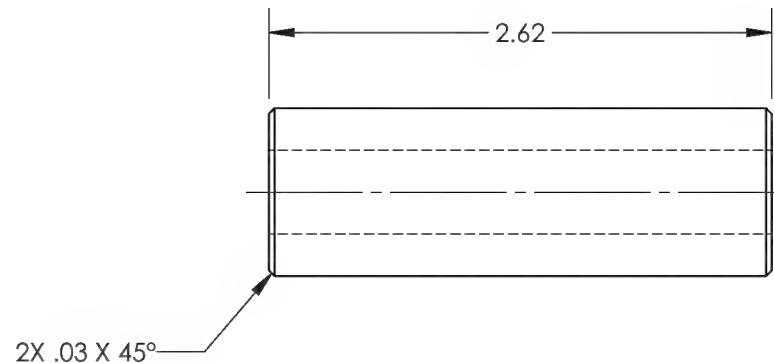
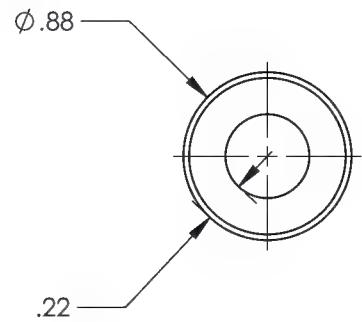
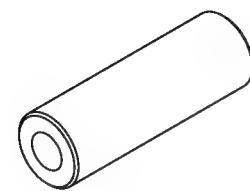
MOUNT PLATE

(-17)

DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-17
REV	1
MATERIAL A36/1018/1020 HR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX ± .005 FRACTIONS ± 1/8
TREAT	.XX ± .01 ANGLES ± 5°
FINISH SEE -3	X ± .1 SURFACES = 125 ✓
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE	1:2
DATE	7/13/2016
SHEET 10 OF 17	

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-19

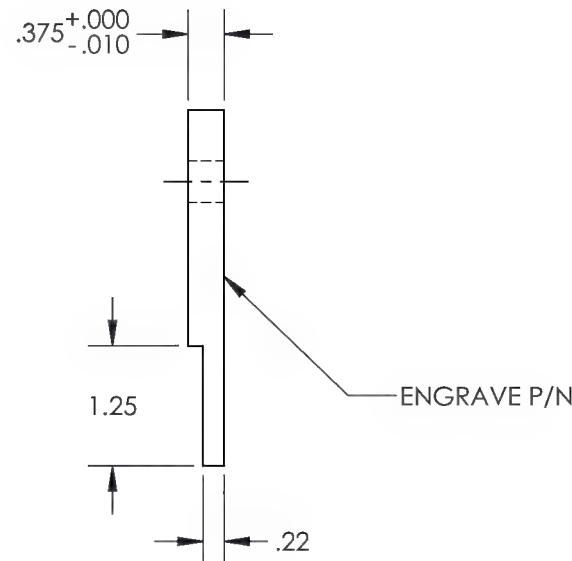
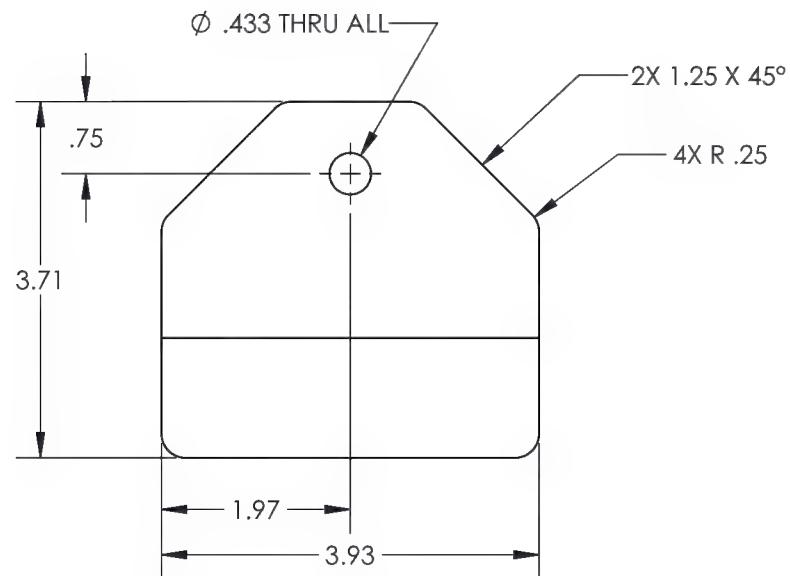
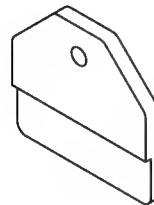
CLAMP TUBE

TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-19
REV	1
MATERIAL STEEL TUBE	
HEAT	
TREAT	
FINISH SEE -3	
SPEC	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
.X ± .1 SURFACES = 125 ✓	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE	1:1
DATE	7/13/2016
SHEET 11 OF 17	

DART
AEROSPACE

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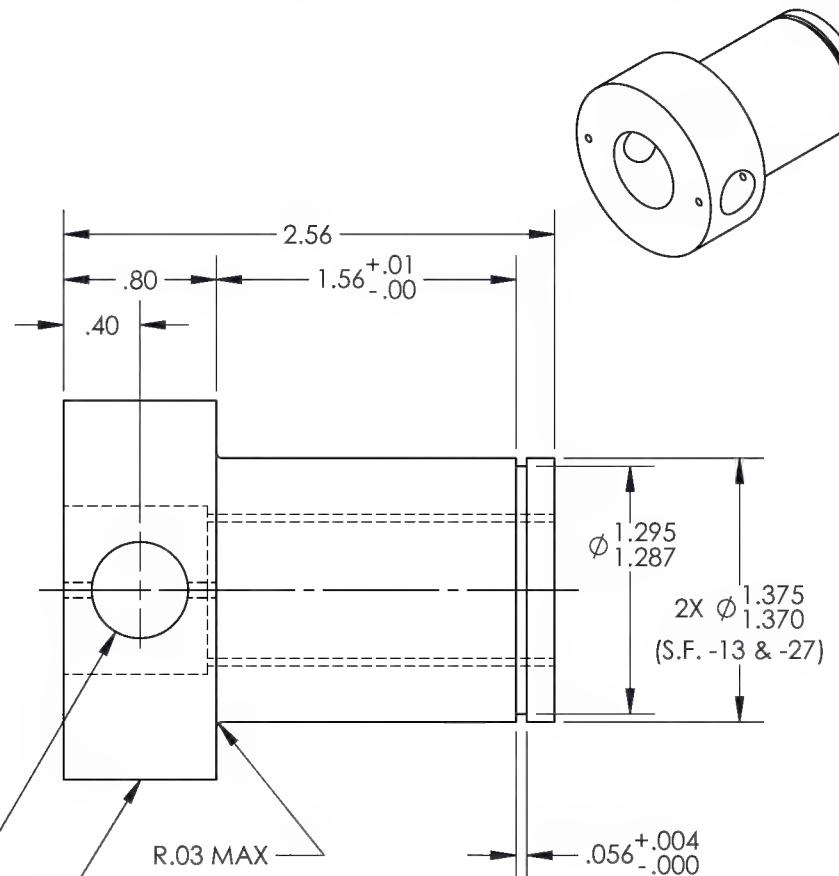
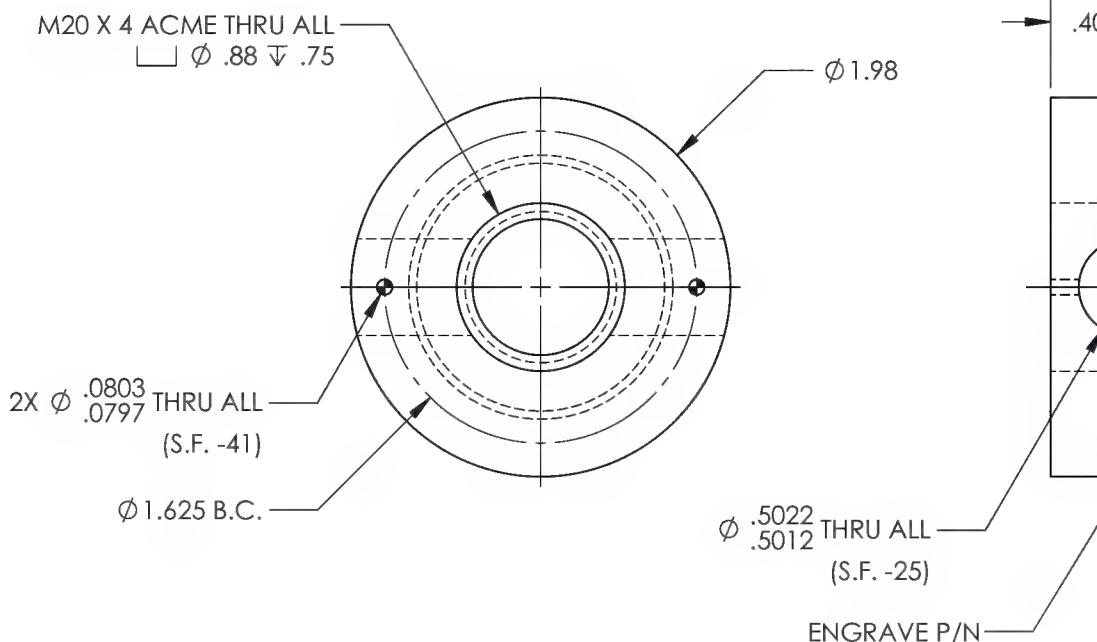
TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-21
REV	1
MATERIAL A36/1018/1020 HR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX ± .005 FRACTIONS ± 1/8
TREAT	.XX ± .01 ANGLES ± 5°
FINISH	X ± .1 SURFACES = 125 ✓
SPEC ASTM B633 TYPE I SC 2	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE	1:2
DATE	7/13/2016
SHEET 12 OF 17	

(-21)

VISE PLATE

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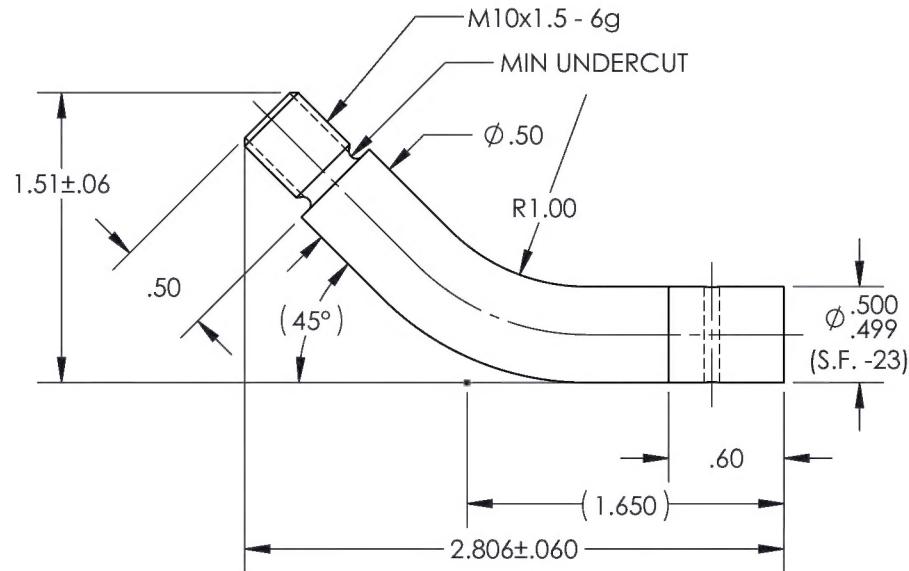
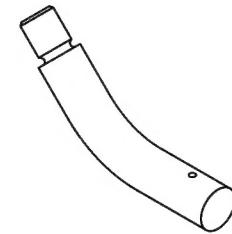
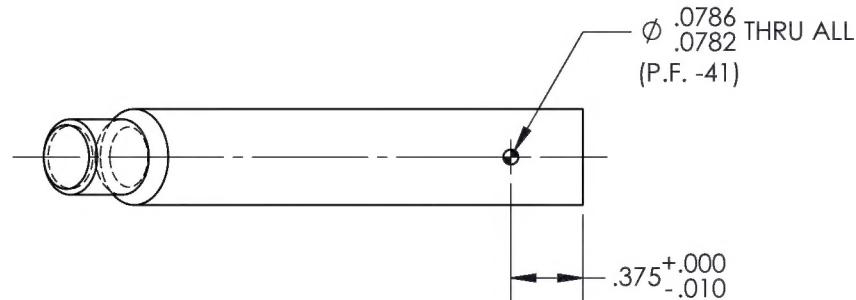
REV	ECR	REVISIONS	DESCRIPTION	DATE	INITIAL	APPROVED
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DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO. RBE1X56-131-402-23 REV 1	
MAT'L 4140/4142 Q & T UNLESS OTHERWISE SPECIFIED HEAT FRACTIONS ARE IN INCHES TREAT .XXX ± .005 FRACTIONS ± 1/8 FINISH ZINC PLATE .XX ± .01 ANGLES ± 5° SURFACES = 125 ✓ SPEC ASTM B633 TYPE I SC 2 DRAWN BY: DUERFELDT CHECKED: MACKOVJAK OPPS APPR: ANDERSON QA APPR: LINDSAY APPROVED: GILBERT USED ON MODEL EC145	
SCALE 1:1	DATE 7/13/2016
SHEET 13 OF 17	

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REV	ECR	REVISIONS		
		DESCRIPTION	DATE	INITIAL APPROVED



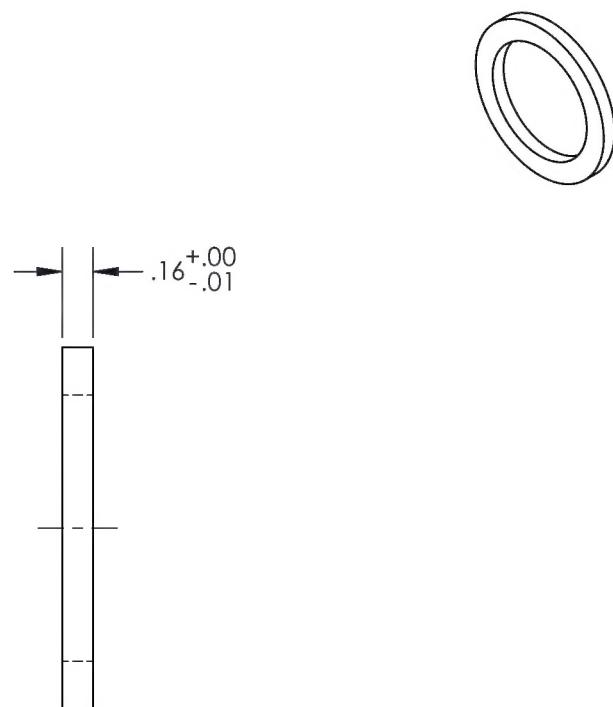
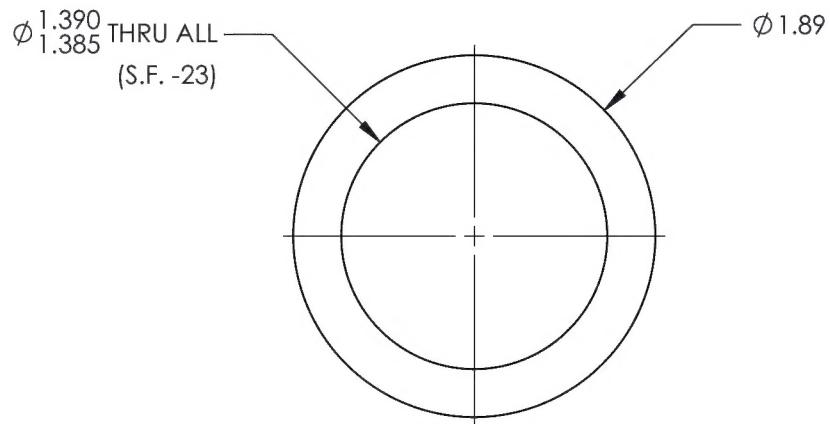
(-25)

CRANK HANDLE

DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO. RBE1X56-131-402-25	
REV 1	
MAT'L 1018/1020 CR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT .XXX ± .010 FRACTIONS ± 1/8	
TREAT .XX ± .03 ANGLES ± 1°	
FINISH ZINC PLATE .X ± .1 SURFACES = 125 ✓	
SPEC ASTM B633 TYPE I SC 2	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL EC145	
SCALE 1:1	DATE 7/13/2016
SHEET 14 OF 17	

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REV	ECR	REVISIONS	DESCRIPTION	DATE	INITIAL	APPROVED
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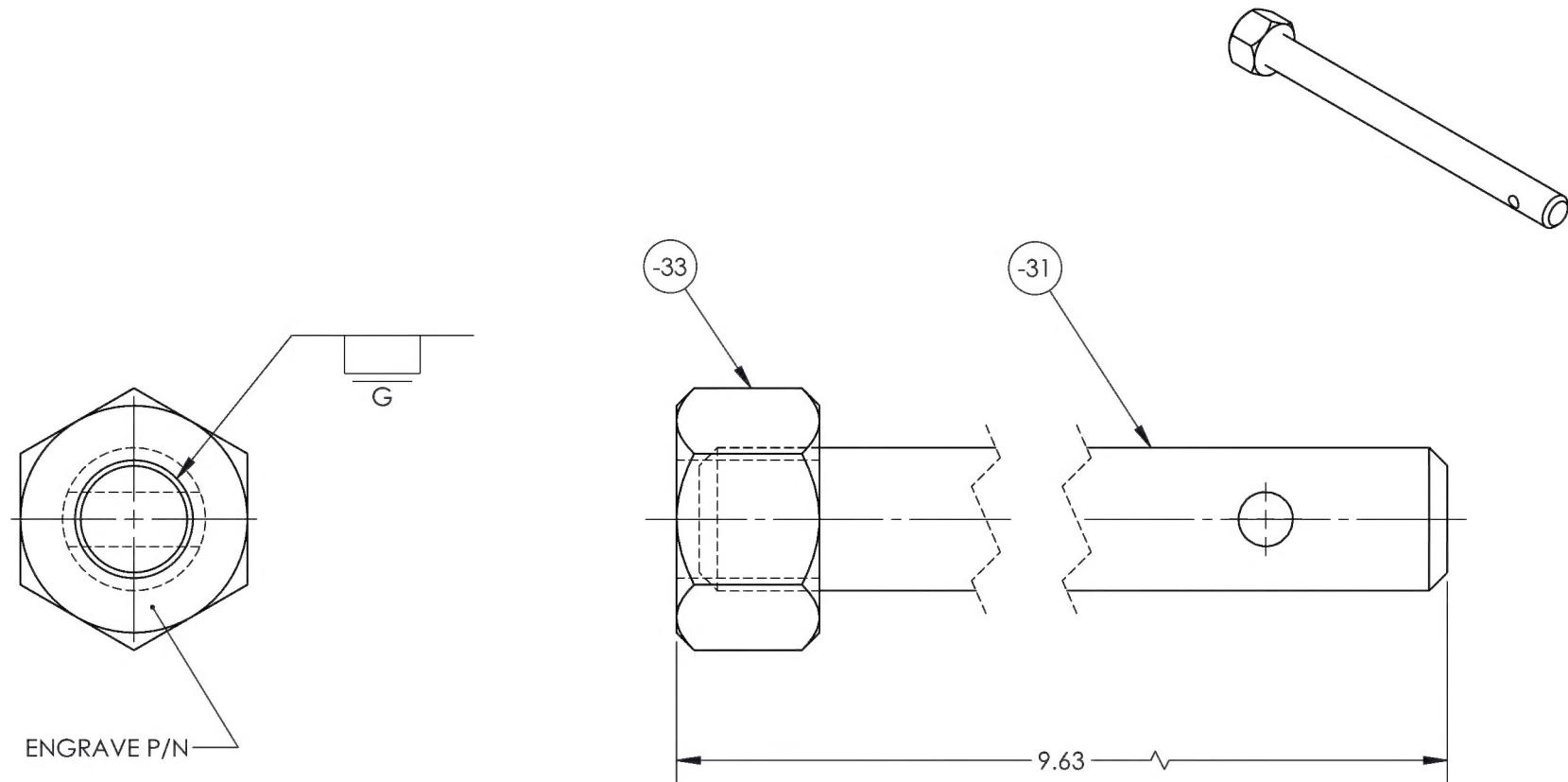
DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-27
REV	1
MATERIAL 1018/1020 CR	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT	.XXX ± .005 FRACTIONS ± 1/8
TREAT	.XX ± .01 ANGLES ± 5°
FINISH	X ± .1 SURFACES = 125 ✓
SPEC	ASTM B633 TYPE I SC 2
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE	1:1
DATE	7/13/2016
SHEET 15 OF 17	

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SPECIAL WASHER

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REV	ECR	REVISIONS		
		DESCRIPTION	DATE	INITIAL
				APPROVED



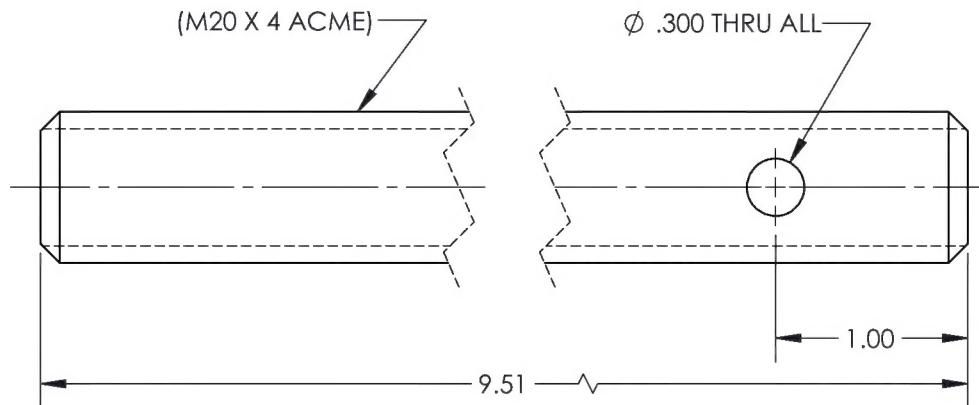
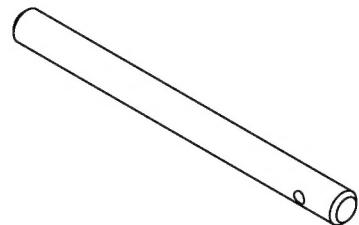
-29

ACME SCREW WELDMENT

DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO. RBE1X56-131-402-29 REV 1	
MAT'L	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT	.XXX ± .010 FRACTIONS ± 1/8
TREAT	.XX ± .03 ANGLES ± 1°
FINISH	X ± .1 SURFACES = 125 ✓
SPEC	ASTM B633 TYPE I SC 2
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	EC145
SCALE 1:1	DATE 7/13/2016
SHEET 16 OF 17	

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REV	ECR	REVISIONS	DESCRIPTION	DATE	INITIAL	APPROVED
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DART AEROSPACE	
TITLE	
ASSEMBLY DEVICE	
DWG NO.	RBE1X56-131-402-31
REV	1
MATERIAL STEEL	
HEAT TREAT	
FINISH SEE -29	
SPEC	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .005 FRACTIONS ± 1/8	
.XX ± .01 ANGLES ± 5°	
X ± .1 SURFACES = 125 ✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY:	DUERFELDT
CHECKED:	MACKOVJAK
OPPS APPR:	ANDERSON
QA APPR:	LINDSAY
APPROVED:	GILBERT
USED ON MODEL	
SCALE	1:1
DATE	7/13/2016
SHEET 17 OF 17	

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ACME ROD